BYWAYS AMONG CRAFTSMEN

THE SILVERSMITH'S TOOLS

BY ELIZABETH B. STONE

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HANDICRAFT

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BYWAYS AMONG CRAFTSMEN

By Mrs. Arthur J. Stone

Is it that the perfection of mechanical ingenuity, endlessly repeating its given form, induces in us a weariness of surfeit, knowing as we do that the relentless and intricate machinery, which fashioned some highly wrought factor of our own home furnishing, still whirs its ever increasing duplicates into countless other homes? Is it that through greater numbers and more abundant means a natural separation is resulting, and that the culture of the mind whose habit is formed to the love of the pure in music, and the noble expression of the soul in art and literature, is demanding for itself an environment of intimate surroundings which shall be in harmony with the less tangible life which is within?

The comparative newness of the term *Craftsman* applied to American conditions, leaves its work to some extent a prey to volatile enthusiasms and uncertainties. Along certain lines its efforts must of necessity be experimental. Trusts and combinations, the great live issues which largely constitute to-day's industrial problem, expanding and absorbing till the mind grows dulled in its effort to comprehend the measure of their magnitude, seem scarcely to leave so much as a crevice where the

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aspiration of the craftsman may lodge long enough to take root. Every energy of the manufacturing world is strained, even to the uttermost, in a universal, maddening effort to reduce luxury to its lowest terms. The upholstered chair, the silver spoon must be put within the reach of all men, even though the fabric is so cheapened as to become shabby directly under wear, and the weight of the spoon is scaled down to the minimum, while utility in both cases is lost to sight in the elaboration of meaningless ornament.

Against this chaos of hurried, unsound workmanship, overloaded with ornament, whose purpose none the less among us than in those days when Shakespeare noted it, is still to deceive the eye, diverting it from truer and more lasting merit, the voice of the craftsman pleads for a proper balance of durability, utility, fitness of purpose and harmony in ornament. He can but know that the masses will pass on unheeding, perhaps never knowing that the voice was there, but he looks to find, somewhere in the throng, others who have wished for yet sought in vain the things which he has found missing.

It is not alone the purpose to arouse a sentiment for the recognition of truer merit that impels him to action. The vast system of machine-made laws, which govern the manufactures of to-day, limits and holds him in his work, to a narrow scope that is little better than that of the machine itself. These demand skilled labor and alert intelligence, but the necessities of production require it to be concentrated in a single direction, specialized. He may hammer for all his working years, forever shaping his alloted silver, without any distinct notion of the processes which have resulted in the flat piece from which he builds, or of the steps required to produce the smooth, polished surface of the finish. If he becomes restive under the sameness of constant repetition, the best he can hope for is in the variation of characteristic styles, which he may find through change to some other shop. The scope of his individuality is diminished, until he loses sight of it altogether in the mechanical routine to which he is bound. Fettered though he is, courage is necessary if he would break away. Individuality is overwhelmed in multiplicity, and must yet depend upon recognition. Should he possess skill to fashion his work from beginning to finish the time consumed in each process must of necessity exceed that of the workman whose every day repeats that of the one just past, and who nevertheless is in a measure bound to be his competitor. He can only dare through love, setting aside much that the world rates high, and trusting that somewhere in a shadowy future he may at least find footing. A Cellini or John de Bologna might to-day tread fearlessly among us, but somewhere below the pinnacles the ground takes on uncertainty.

In a brotherhood of craftsmen, drawn together and united by common ideals and purposes, the pathways which lead to a general meeting-ground are many and varied; and a long-trodden and familiar way, to well acquainted eyes seemingly unmarked by special feature, may to those more strange present many an interesting turn. Along one of these it is the purpose of this sketch to follow.

Its subject was born something like half a century ago in that begrimed and dingy city, which, despite man's best efforts to render it unlovely, is yet so rich in the natural charms of its environment as to offer defiance to his disregard. The seed of the craftsman finds here soil favorable to development. The skill of his forbears fashioned the "Sheffield thwytle" which Chaucer's pilgrim carried tucked in his hose, and out from those far-off years he has been steadily moving toward us, a resistless army, mostly lost in the rank and file, but occasionally, as with Chantry, Godfrey Sykes, or Stevens rising to single eminence.

Ruskin knew his sturdy merit, and singling out a favorite beauty spot on the suburban hills, bought and endowed a museum which should be for his advancement. Its purpose was one with St. George's Guild, a society established by him in London, and one or two other industrial centres, to give opportunity to artistic workmen. It was a movement ideal in its conception, but never obtained a strong, decisive hold. The museum, small but selected by Ruskin with the utmost care, was removed after some years to a less beautiful but more attainable location, where it is now maintained by the municipality with reverential pride.

The city is oftenest heard of through its iron and steel industries, the famous Cutlers' Guild, founded in the sixteenth century, having figured in many a historical event; but it also holds an eminent place in the manufacture of silver, most notable, perhaps, from being the home of the older, now unused form of silver plating on copper.

Jealously and as a sacred trust the craftsman has guarded the secrets of his work, believing that with him rested the output and value of his labor. He has fought with undaunted valor the invasion of his cherished rights, and adjusted himself reluctantly to inevitable defeat. In desperation he bound himself in Trades Unions, and not even murder withheld him from his purpose to withstand the encroachment of advance. Within thirty years he has decreed, that in a stated number of hours, a given number of men will accomplish a limited production, which must maintain the standard wage he had established; only to find his hold lost and his business gone. Only by inches will he yield his ground, and he listens with scornful incredulity to the warnings of the farsighted in his clan, which of late years have been sounded with increasing frequency. After all, his contention is not so far removed from our own, for the standard of his material, and the time he insists on, give to his work a lasting merit, the lack of which we constantly deplore in our up-to-date lightning processes.

English silver acquires an added interest from the careful marking under government supervision which fixes its date and sterling quality. Not long ago a traveler became covetous of a certain pair of fine sugar nippers, of a style no longer used, belonging to a friend, and searching among many antique shops finally found an inferior pair which were purchased. No particular attention was given to the date letter, the purchaser assuming that they were of a period some fifty years back. It was therefore in the nature of a surprise to find, some time later, when the inspiration came to look it up, that they were made in the year of the purchase, and left with a dull, worn-looking finish to catch the unwary.

The standard of silver, which is also our own, has remained practically unchanged for five hundred years. Two hundred years ago it was raised for about twenty-five years, but the test of wear proved it too soft to be durable. This silver has the figure of Britannia stamped upon it, and is known to the trade as Queen Anne silver. Its standard is still lawful, but seldom called for. With the date and sterling mark of all English silver is also the mark of the office at which it is assayed, and the registered mark of the maker, or the shop from which it is sold. There are now seven offices where silver may be assayed, some of the older ones, like York and Exeter, having been discontinued. London is the oldest among them, its leopard's head being so highly esteemed that it is not unusual for manufacturers in the other cities to send their work there for its marks. At the Goldsmith's Hall in London, date letters are preserved from the time of Queen Elizabeth; Edinburgh has date letters from the seventeenth century, and Dublin from somewhat later: but for the most part the lists begin close upon the date of our independence, that of Sheffield starting in 1773.

It has been recently reported that American manufacturers are sending over parts to get the stamp of the English assay. Such cases are provided for by a fifth mark, F, added to those already mentioned.

The Ecclesiastical plate of the old churches is often of great interest, and pieces of the latter half of the seventeenth century are not uncommon. The most valuable private collection seldom contains a piece prior to the eighteenth century.

Early in the nineteenth century there was developed in Sheffield a new method of fusing a thin piece of silver upon copper or brass which was christened with the name of the city. Attaching silver to baser metal by means of solder had been known from remote times. The gay caparisons of horse and rider in the tournaments made a demand for work of this sort, and Otley, a little town to the north of Sheffield, was long a center of its trade. It is related that as the call of such trappings went out, its craftsmen drifted toward Sheffield, and it is not unlikely that through their knowledge and skill the copper plating was perfected.

It was at once recognized and copied by the French, who had hitherto known only the joining by means of solder, and was used for fifty years or more, when the modern process of electro-plating superseded it. For a time after the discovery of the latter method, following a common law, the old plate was discredited, and many a fine piece suffered in careless hands. To-day collectors place a choice piece of Sheffield plate side by side with sterling silver.

In the older process, after the fusion of the metals, the piece was rolled until just a coating of silver was spread over its entire surface, when it was ready for shaping. The mounts were stamped in the thinnest silver, the work of a stamper requiring particular skill. These thin stampings were filled with soft solder, and sweated on to the body by gentle heat. An old joke of the trade was to the effect that stampings could not be allowed near an open window lest they be blown away.

The unsophisticated of to-day are often dismayed, after a vigorous polishing, to see the ugly black of the solder appearing in the mount, or the less objectionable copper shimmering through the silver body. The fortunate possessor of a fine bit of copper plate learns to be very tender with it. Oftentimes the beauty of its form and the richness of its mount rival the solid plate. A heavy, elaborate mount, and, in the trays and snuffer trays, highly ornate flat chasing belong to its period. In the simpler mounts, the egg and dart and gadroon are often exceptionally fine. And again we have seen in the hands of private collectors pieces wholly devoid of ornament save for the fluting, and so chaste in form as easily to pass for sterling, were it not for the absence of the valued hall marks.

In the past ten or twelve years it has become increasingly difficult to obtain genuinely fine specimens, particularly of the smaller pieces. Kensington has made a choice collection, and the Sheffield Museum, alive to its connection with the industries of its city, has an authorized agent watching any opportunity to add to its number of beautiful pieces. The great wine coolers of the period, having out-grown their original use, are occasionally seen in the fine hotels, adorning the dining table. Being urn shape, with handles, they form most ideal fern pots.

It was following the decadence of copper plating that our little lad had forced upon him that most serious question of making a way in the world. The death of the father, after a long and weary illness, which exhausted the little surplus that had been accumulated, left the brother and sister with practically no resources other than the love of a good mother.

Schoolroom doors closed behind him at the age of eleven. England, not quite ready even yet to grant freely and liberally the education of her children, left the matter in those days entirely to the discretion of her church which, secure from molestation, went indifferently about it. On what merit her teachers were chosen is not evident, but it is certain that in the boys' schools, tyranny of rod and deep intimacy with the bottom of the ale mug did not disqualify. Dingy and cold, comfortless and cheerless, with its one little grate fire, and its hundred and more boys, the schoolroom lingers in the memory, far enough removed from the finely equipped buildings and trained teachers of which the city proudly boasts to-day. Somehow in that brief period, despite the anxious eye which followed the mood of the master, the great foundation rudiments were gathered and absorbed.

Then followed several years in which such work as a little lad may do, by way of errand boy, and other service sometimes heavy for small hands, went to help out the over-burdened mother, until having reached the age of fourteen it was settled that he should follow a trade of the family and become a silversmith.

Disheartening enough must have been the mother's experience in her first effort to find a master for the would-be apprentice, for she was told that he would only accept one on payment of a premium of twenty pounds. Further effort resulted in better fortune, and a certain blue document drawn up in legal form on the fourteenth birthday, remains to tell the conditions of her contract.

Stamped for the city and the revenue of two shillings six pence, and beginning in heavy black old English type, "*This indenture* made the . . . day of . . . in the . . . year of the reign of our Sovereign Lady Victoria," it sets forth the contract of mother and son on the one side, and master on the other, for a period of seven years. It requires that the son enter upon the contract of his own free-will, and with his mother's consent; and during all this time the son agrees to "serve his said master faithfully, keep his secrets, observe his lawful commands, forbear to do him hurt, or injury, either in his person or property, attend regularly and diligently to his affairs and interest, account honestly for all money, goods, and effects which shall be committed to his . . . charge, and deliver up the same as and when required so to do, and in every respect conduct himself as an industrious and trustworthy apprentice."

The master agrees for "himself his executors, administrators and assigns" that he will teach or cause to be taught the trade or business of designer, modeler and chaser. Then the wages follow: for the first two years the mother shall receive three shillings a week, for two years more five shillings a week, for the next two years eight shillings a week, and for the year remaining ten shillings a week.

The mother then binds herself to find and provide her son with "wholesome and sufficient meat, drink, lodging, wearing apparel, medical and surgical aid, and all other necessaries suitable for his trade and employment." Brave mother, to promise so much on so small a stipend. This completes the indenture, which is signed, sealed and witnessed by the three, and all being happily arranged, it is the master's part to give his lad a "fastening penny" in the shape of half a crown.

An apprentice could not be lawfully bound under the age of fourteen, and being so bound, not even for the army could he break his indenture without mutual consent duly witnessed. Such a system would seem to suggest that there are things outside of Heaven that are not reached at a single bound, and the slow mounting of the ladder infers things irksome and little to the taste in our day and time. It is undoubtedly true that no long drawn out apprenticeship will ensure skill unless the temperament of the workman holds some note responsive to his work. Equally so genius untamed by the tools of its craft, scatters itself as waste material.

The youngest apprentice is not without initiatory duties. He must settle his status with the big boys, oftentimes by a vigorous use of his fists. He must sweep and keep tidy the smudgy little shop, run errands for his master, hold work for him with careful attention, and at half-past four in the afternoon he must attend to the mashing of the tea, which each associate has brought from home, ready for the boiling water, wrapped in a bit of paper, with sugar, and a pinch of bicarbonate of soda to bring out its full strength. Half an hour is given to this national repast, then work goes on again until seven. In large centers like Sheffield there are established National Schools of Design, offshoots of the noble parent at South Kensington, and partly endowed by the government. To this school our apprentice, who would learn design, was expected to go for three nights in a week, after his day's work was done. A course in geometrical drawing was first required, followed by freehand. These schools, then in their youth, have been a steadily increasing power in developing the understanding of art principles among the people, and the present-day curriculum is much enlarged. A small tuition is asked, and deficits have been liberally subscribed by the manufacturers, who realize great benefit from them. The apprenticeship required fifty-nine hours a week, and to pay even a small tuition our lad must work overtime for the nights remaining, except on Saturday, when he was free from five o'clock. It is not strange that instruction, attended by such excessive demand, should have been curtailed to strict necessity.

Designing and modeling were not definitely taught him during any period of his apprenticeship. If he were apt he might gain a knowledge which would lead to their development in later years, if not he would become, through practice, a skilful chaser, following a prescribed pattern, for he was held during the whole time strictly to chasing and fluting. Weeks were given to acquiring command of the small tools used in this work, and to the making and tempering of them. The old chaser gradually acquires a standing army of hundreds of these little punches, wholly bewildering to the uninitiated, but among which he chooses with deft certainty according to his needs. The making of the pitch which is to hold the work, the methods of laying out and putting on the pattern, are all parts of his trade.

Large, plated center and dessert pieces, with glass holders for fruit and flowers, were in vogue in these first years. They were often incongruous in design, sometimes with grapes and vines ornamenting the standard, and perhaps two cast deer on the base underneath. The grapes were cast in bunches, the leaves separately, and all were joined by means of solder. Having gained some command of his tools, one of the first tasks was the chasing of many and many a hundred of the grapes. The leaves were elaborately done with minute veining both front and back, but they belonged to days of more experience. Repetition was the order of the times, and the Greek key, and two scrolls with shell became chased indelibly into the memory.

In the making of any given piece of hollow ware, such as a tea pot, the designer will make from his drawing a half-section of its parts in clay. The body being hammered, or by the quicker method spun, serves simply to model the parts proportionately, or it may be to show the relief of the ornament. From the handle and spout a plaster cast is taken, which having been removed from the model is carefully lined with clay to the required thickness of the silver, and a second plaster is poured over it. The two plasters being separated, and the thin clay removed, there remains upon fitting them together again, a hollow space which represents the desired part. Into this hollow, hot wax is poured and, the plasters being once more separated, a wax model is obtained, from which may be cast a more durable fac-simile in brass. The brass model is turned over to the chaser, who exercises the utmost care to work out every imperfection, and to leave no part so undercut as to interfere with the drawing off of the final silver casting. It is only as the apprenticeship nears its close that important work of this kind is undertaken.

Rapid growth and close application (for beside the hours required, many another of overtime went to secure some coveted desire) told upon the physical strength of the boy, without defeating his steadfast will to acquire the best. For somehow in this period, by means of the little Clementi piano in the home, he managed to acquire an appreciative knowledge of the great masters, as well as to become familiar with the noted writings of the day.

It must have been the saving grace of the holidays, so dear to the English heart, that brought him at last to the strength of manhood. Upon the arrival of each long-anticipated day, provided with umbrella and knapsack, he left behind the gas and smoke of daily life, tramping unnumbered miles over moor and dale, till all the country round about was friendly and familiar; acquiring in his maturer years an endurance that made long distances a delight, and took him afoot over great portions of his native shire.

The holidays begun with Shrove Tuesday, when the master was in duty bound to give his lad fourteen pence. Church must not be omitted on that day. Easter was a long holiday, beginning with Good Friday and lasting over Easter Monday and Tuesday. Whitsuntide found the hawthorn whitening the hedge-rows, the blackbirds and thrushes lilting in the soft new green of the trees, the lark rising high over the field-roads, and the cuckoos answering across the woodlands.

But Christmas was the great time of the year, and coming as it did in the busy season, the overtime system was carried to its greatest lengths. For two or three weeks before its arrival work was kept up until midnight, often at the last until later yet. On the last work morning, the morning before Christmas, the boys and girls gathered in the hall of the salesroom, singing Christmas hymns together before ending the year's work and beginning a week of great festivity.

The close of the seven years was made a matter of celebration among the men. Its beginning, as we have said, was marked with the fastening penny, and by quite a natural sequence the end was known as the losing. In the morning of the last day, all over the shop, the boys suspended the stakes used in shaping the silver, and at intervals the youngest apprentice would beat upon them with a wooden mallet, the others joining in. The old-time stake was made of steel, so the result was a merry, musical, chime-like jangle.

The afternoon was made a holiday with a feast at some little inn outside the town, and as it drew to a close the lad just coming into his majority was chaired or crowned, by being placed in a chair upon the table, while the two apprentices next oldest held a brimming punch bowl over his head, and the others about him chanted some jingling doggerel whose burden was,

> "Here's to he who is now set free,
> That once was a 'prentice lad."

Then the indentures, which up to this time had been in the keeping of the lawyer, were given over to him, and with their possession he passed out of bondage.

It would seem as if in the apprenticeship system the conditions greatly favored the master. It was not usual for him to have but one apprentice at a time; quite often the father passed his trade in this way to his son. The larger firms taxed a master two shillings a week for his apprentice. A bright boy soon earned the wage paid him, and long before he was out of his time was a source of profit to his master. His instruction seems generally to have been based upon what he could earn, rather than upon consideration of what would be for his best development. With freedom came the real test of the workman, in the more extended opportunities open to him, where he might confine himself to some special line of work embraced in his trade, or broaden and enlarge in all directions upon what he had acquired.

Soon after the losing our craftsman became restive, and drawn by the historic beauty of Edinburgh, applied quite hap-hazard for work in one of its shops. He had the luck to find them in need of help, and in about three months after the close of his apprenticeship was earning thirty-five shillings a week, a very satisfactory wage for the time. It need hardly be mentioned that the good mother, at home with her daughter, now found her burdens lightened.

Here was a true little handicraft shop, close upon Princes Street, employing about twenty men, where the silver was melted and rolled, and the work hammered and cast. The power was furnished by a wooden wheel some ten feet in diameter, reaching from floor to ceiling, which was turned by a powerful half-witted fellow of whom the others were wont to say "Wully has a want." It was kept in work by one of the two largest Princes Street shops, and fine things went out from it, from the various small trappings that adorn the Scotch regalia, to rich and heavy hollow ware.

Our craftsman was entrusted with the chasing of two vases with tops, standing eighteen inches, each of which employed him for three months in the doing, and it was here that he was first actively engaged in design. During his stay the fine old silver plate of the house of Bute, consisting of hundreds of plates and trays, was brought down to be renovated and put in order in honor of the coming of age of the young Marquis.

At the hour of afternoon tea, the apprentices would get together for merry contests over their hornpipes, one of their number whistling on and on, with never a final cadence, after the endless fashion of the true Scotch jig.

There was no lack of incentive for the much loved tramps, and Sundays and holidays found him afield, among the crags of Arthur's Seat, studying the lavish art of Rosslyn Chapel, or enjoying the restful peace of Melrose or the district about Abbotsford. Most fortunate in having for a room-mate a young native of Ayr, who was a devotee of Burns, he joined in his enthusiasm, and together they acquired many of his finer poems, as they sat by their "ingle bleezing brightly," and toasted and munched the oatcakes which the Scotch mother sent them.

A year passed quickly and pleasantly, at the end of which he was able to make a change for the better, and returned to his home to a shop not larger than the one he was leaving, but progressive in its arrangements and appliances. After the freedom of the year just passed the sharper lines of subdivision in the work were most noticeable. The hammerer was no longer a mounter, and the flat chaser was distinct from the worker in repoussé. Indeed, flat chasing was in decline, and the skilled workmen who wrought the beautiful flowing lines of delicate scrolls to be seen on fine examples of its period were nearly of the past.

Our craftsman now found himself able to take up a further study of design, under private instruction of one of the masters of the school, until he was confronted with a most troublesome difficulty through failure of his eyes from too close application. For weeks he faced the threatened undoing of his craft, but absolute rest, prescribed by a noted London specialist, averted the danger, imposing a more cautious future.

In three years more, change was again made to one of the larger firms. The silver of this period was marked by beautiful fluting, which is in the department of the chaser. It was also a time when the bodies of sets were covered all over with repoussé, even to the bottoms. The signs of the zodiac done in twelve little panels had great popularity, and a set with scenes from Bolton Abbey in the olden time, chased after the paintings, "The Weighing of the Game" and "The Return from Hawking" was in great favor. Four twelve-light candelabra, modeled by Marshal of London, which required weeks in the chasing, and were remarkably fine examples of acanthus work, were favorably noticed by Mr. Ruskin. Much time was now given to the making of drawings and sketches required in correspondence, and of working patterns. The Ruskin Museum was an active factor in the life of these days, the superior collection of Albert Durer's engravings, which it contained, furnishing many a suggestion for the treatment of work.

Nine years were spent here under the pleasantest associations, during the latter part of which frequent advertisements in the home papers, by manufacturers in the States, who were seemingly always in need of more men than home labor could supply, began to impress him. Reports from those already in the country were so favorable as to make the necessary change alluring to a young man ambitious to acquire a sufficient competence to ensure comfortable security in later years. Just before leaving the country he attended a meeting of Craftsmen at the old King's Head Tavern, which resulted in the formation of the Sheffield Society of Arts and Crafts, which now has a well established standing, and gives successful exhibitions of the work of its members. It was in the fall of the year when he crossed in the old Marathon, hopeful, vigorous, and ready to test the reality of new-world optimism. Soon after his arrival he came upon a little New England lake in all the splendid glory of its autumnal color. It was a never-to-be-forgotten sight in the peaceful blue of a rich September day, and the embodiment of some pen picture out of Cooper's tales, which had caught and held the memory.

In strange surroundings, under strange conditions, his first months seemed comparatively unfruitful, but he was permitted to realize in full measure the dreams of his allurement, and after years of successful effort, at length found himself in a position to gratify a long cherished fancy, to work without stress in a little shop of his own, where one might dwell upon the shaping of a thought, with the question of the greatest possible return in a given minimum of time no longer paramount.

Obstacles become numerous in the realization of such dreams, for in the making of silver, the hammerer, spinner, caster, die-sinker, stamper, chaser, engraver, finisher, and in these days the colorer, are each trades to themselves. In the limited output of a single workman, not all are called for, but hammering, mounting, ornamentation and finish belong to the simplest efforts, and must be mastered before satisfactory results may be looked for.

Little shops have an established footing in the old country, and it was always "over there," that the dream shop had its setting. Till, as the years went by, and each return to the mother land marked more fully the ever increasing separation from the old life, and the silent absorption into the feeling of the new, a transformation was at last accomplished. Shadow became substance, but in a new-world atmosphere, where it awaits the evolution of years before it, too, becomes embodied in a foot-path leading — but who can tell? —

EDITORIAL

AN interesting exhibition of furniture by the "United Crafts" of Eastwood, N. Y., is to be seen at the Mechanics Fair in Boston. The admirable workmanship and finish of this furniture make one wish that it were free from all affectation and exaggeration in design. Some of the armchairs suggest sitters of abnormal size and bulk, and there seems to be a lack of true relation between the construction and the use. We do not like to feel an excess of solidity any more than an excess of any other quality, and one of the greatest sources of satisfaction is the feeling of true proportion. It is all the more necessary for genuine craftsmen to avoid anything approaching eccentricity of design, as the cheap imitators of so-called "Arts and Crafts" things are apt to reproduce the eccentricities and neglect the good qualities, and the idea of the Arts and Crafts tends to become associated in the public mind with things that are odd rather than beautiful. It is certain that, in the present exhibition, the more delicate pieces are by far the more satisfactory, and we should be glad to see the excellent work of the "United Crafts" tending toward greater delicacy and appropriateness.

ON the first of October the *Craftsman* — the magazine published for the last year by the "United Crafts" — began a new period in its history, clothed in a new dress. Its cover is very simple and attractive, and the pages are so printed as to be a real

pleasure to the eye. The subject matter is valuable and interesting, containing articles by Professor Oscar L. Triggs, of the University of Chicago, on "The Workshop and School"; by Ernest H. Crosby on "The Wealth of St. Francis, a Study in Transcendental Economics"; and by Frederick S. Lamb, on "Lessons from the Expositions."
We congratulate the "United Crafts" on this new departure in the *Craftsman*.

NOTES

THE first meeting of the season at the rooms of The Society of Arts and Crafts in Boston will be held on November 21, when Prof. H. Langford Warren will speak on "Qualities of Carving."

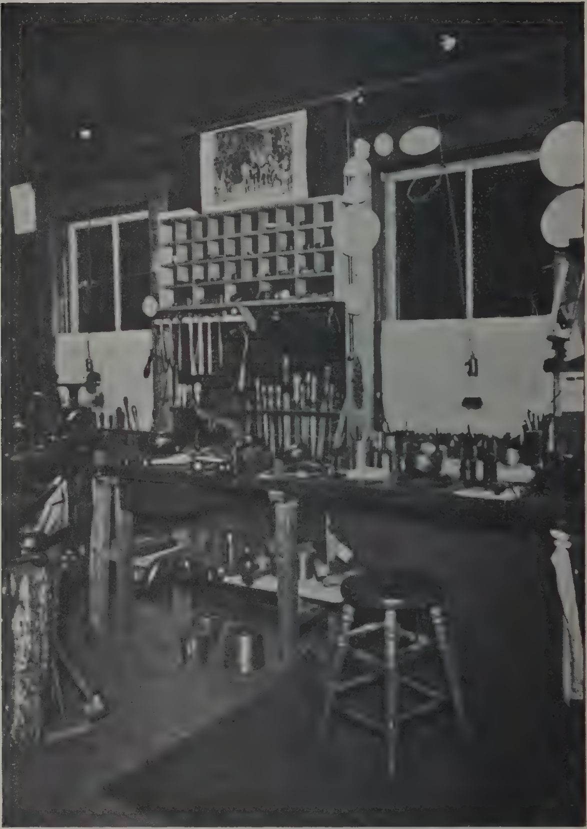
THE Chicago Arts and Crafts Society is getting ready for its annual exhibition. For full particulars address the secretary, Miss E. R. Waite, 1301 Woman's Temple, Chicago.

THE Art Institute of Chicago is also preparing for an exhibit of "Designs for Decorations and Examples of Art Crafts" to open December 16, closing January 10. Entries close December 1. Exhibits received until December 6. For circulars and entry blanks, address W. M. R. French, Director, Art Institute, Chicago.

Exhibitions of Arts and Crafts are being arranged by the Sketching Club of Indianapolis, for late in November (address Miss R. E. Selleck, High School, Indianapolis); by the College Endowment Association of Milwaukee, for February (address Mrs. Martin Sherman, 661 Marshall St., Milwaukee); and by the Klifa Club of Burlington, Vermont (address Miss Katharine Whitcomb, 301 College St., Burlington, Vermont). We understand that each of these exhibitions will be open for one week or more.

The Saturday Club of Brunswick, Maine, is to have an Arts and Crafts exhibition, with an address by Mrs. Karl von Rydingsvärd, on November 29, the exhibition being for that day only. (Address Mrs. Leslie A. Lee, Brunswick, Maine.)

We shall be pleased to give notice of coming Arts and Crafts exhibitions, if those in charge will send us accurate information as early as possible.



A SILVERSMITH'S SHOP

HANDICRAFT

VOL. II NOVEMBER, 1903 NO. VIII

THE SILVERSMITH'S TOOLS

By Elizabeth B. Stone

"There is always work and tools to work withal, for those who will."

The student of primitive man observes, with attention to the minutest detail, the shape, the texture, the weight of the rough-hewn implements which have survived him, from them deducting the uses to which they were put, and so determining the first needs of man. For the tool is an absolute record of man's wants, his habits and the quality of his conception. From simple forms, expressing no more than the need of sustenance and protection, and the first crude scratching that marks the dawn of ornament, through ages of increasing complexity of motive, the craftsman surrounds himself with tools that have a certain complementary individuality, fashioning them to interpret the thing he has in mind.

Between him and at least a few of his ever increasing collection there is a personality of feeling that has grown from long years of intimacy and the confident knowledge that they are the sympathetic creatures of his will. But carefully as he cherishes, jealously as he guards, and highly as he prizes his working outfit, your true craftsman is not subservient to it. The unuttered voice within him must be made audible, and lacking the proper equipment, he is sure to make shift with whatever comes to hand.

A genial hostess tells with zest the story of a valued spoon, apparently ruined by having the bowl turned over and crushed. She was lamenting her misfortune in the presence of a silversmith, who asked if he might see it. "Stepped on, was it?" he said; "we might try stepping on it again." Suiting the words he put it under his foot, fingered it deftly, and returned her the shapely original.

The writer cherishes a crude pair of silver letter-scales, which will weigh up to two ounces, and were fashioned while she watched. The tools used were a pair of scissor can-openers, a hammer, a file, and a few little chasing-punches. Out of a pair of tablespoons, unfortunately of the old-time light weight, were made two little salts, fashioned from the bowls, and, from the handles, two salt-spoons and a lemonade-spoon. For making these were added to the tools first mentioned a kitchen flatiron and an iron bolt filed to shape the bowls.

Another pair of tablespoons, of later date and better weight, having been rescued from the village jeweler's scrap-box, where they had found their way, probably from being badly worn on one side, are now in service as a salad set, the pierced bowls calling for an additional saw. Work of this sort is more properly a diversion than a matter of serious consideration, but it seems not inaptly illustrative of Lowell's lines first quoted.

"To those that have eyes to see" belong the true millionaires, the rich ones of God's universe. If in a stretch of swampy undergrowth the eye is only held by the brief carnival days in which it gives a royal exhibition of autumnal glory, and sees not the filmy delicacy of opening leaf-buds, the cool verdure of heated summer days, the penciled tracery of leafless shrubs heightened by the snow, or their subdued throbbing richness of color as they rise, sap-laden and full of promise, out of the frost-bitten past, the heart has not yet come into the full inheritance of its wealth of joy.

The Arts and Crafts movement arises from the need of such as have learned to see, and the craftsman finds a strong impelling impulse in the discrimination of the seeing eye. Intelligent appreciation of all forms of workmanship is intensified by a knowledge of the processes involved, and especially is this true if the work is of individual creation, accomplished by simple methods with tools easily understood, although not of necessity easily mastered.

It is well that countless experiments have so paved the way that many things have been settled and may be accepted without question. Crucibles and rolls are unnecessary if the work is limited. Reliable firms, whose sole business it is, provide guaranteed stock of any desired gage. No tests are required as to compounding the medium used, and the great principles involved in its working are established. It may be beaten or hammered ; becomes hardened by the process, but is made malleable again on application of heat. It may be drawn or pulled into a desired shape in the form of wire, melted and cast in molds, or under great pressure made to assume a given pattern.

In its virgin state silver is too soft to resist wear, and always requires some proportion of baser metal to render it serviceable. This proportion has been practically unchanged for more than five hundred years, and the sterling stamp, to be looked for on all silver, guarantees that 925 parts in 1,000 are pure metal.

The spoons made in this country dating back from fifty years are generally stamped *coin*. The metal used in the making of coin contains 900 parts pure silver in 1,000—a somewhat harder composition, and undoubtedly desirable at a period of our history when silver was hard to obtain and costly.

The familiar thin, extremely light-weight spoons of our grandmothers' day are interesting examples, but they had a hopeless way of cracking across the broad end of the bowl, which made repairing a most trying problem. There seems to be no counterpart of these light American-made spoons among English collections. An English and American set in the writer's possession, both of the early nineteenth century, present very interesting and distinct characteristics.

England makes no distinction between coin and sterling silver, requiring both to be .925. Once only she departed from this rule, in 1697, when, suspecting the coin of her realm was being melted and used for plate, she ordered that slightly less alloy should be used for the latter. In thirty years she returned to the old standard, satisfied that the

Britannia standard was too soft to endure. Occasional examples of this period, known to the trade as Queen Anne silver, are to be found, but they are likely to be much worn, bearing the marks of frequent mending.

To be sure of the weight a pair of delicate scales is needed, and the thickness is determined by a circle of steel, known as the wire-gage, around whose circumference are cut the different gages both for wire and flat stock, the spaces being marked with numbers running from one to thirty-six. The extreme gages in hollow ware are from sixteen to twenty-four, and it is only necessary to find the slit which fits the stock.

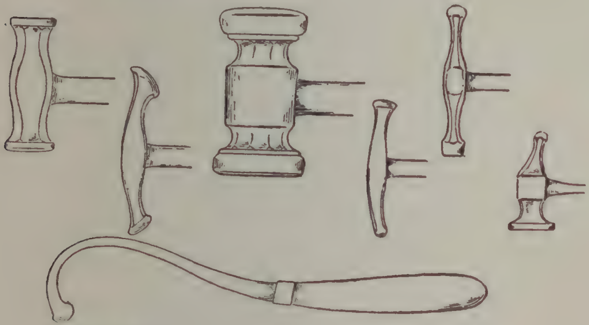
The manufacturer of commercial silver, close pressed by competition, must perforce figure on a minimum weight in his production. Thin stock may be reinforced by wire soldered to the edge, which gives it added strength. It is interesting to note in this connection, from a study of fine old examples, that the wire was not usual in early pieces. The difference in cost between a heavy and light gage in hollow ware is so slight, in comparison with the labor that goes into the making, it seems important that the craftsman, who is not considering quantities, and who is working to uplift the standards of his trade, should make sure that he works in a medium sufficiently strong to place its durability beyond doubt, and to insure its value, under rational usage, as a future heirloom.

For the raising of any metal it is necessary that the blow of the hammer be met with unyielding resistance, and an anvil firmly bedded in a big wooden block, perhaps two feet high and twelve inches across, best serves the purpose. The blow is not delivered straight against the anvil, as in forging, but struck, as one might say, just off the solid. A blacksmith's anvil, with the sharp end of the horn sawed off and rounded, serves admirably for smaller pieces, but if the work is large a proper silversmith's anvil, with two arms branching from a central pillar, and slightly curved and rounded, is needed for advantageous work.

Another anvil, used in the forging of spoons, is strongly suggestive of a section of railroad iron, slightly elevated in mounting, the convex top facilitating the spreading of the silver under the hammer. Anvils are best, but only rarely in these days, made of steel; failing that, of wrought iron with a welded steel top. Cast-iron anvils answer many requirements, however, and are finding a place in the shops.

One thing is absolutely essential in all working of silver. The surface, over which and by which the metal is wrought, must be polished smooth and flawless, for it responds to any imperfection, and will take even the imprint of a hair on which it is hammered.

The hammers most naturally follow the anvils. Some are mallets of wood, thick and heavy, or light and slender; others are buffalo tips cut from the horns to a length of nine or ten inches, and attached to a wooden handle at the heavier end. The point is cut back for perhaps two inches and the blunted edge so formed filed wedge-shape. Heavier ones of the same material are mallet-like, weight being given by a cast-iron frame into which the horn is inserted. The steel hammers are the most numerous family, ranging from the heavy forging-hammer weighing, it may be, four pounds, to the delicate chasing-hammer of less than an ounce. They are stubby or elongated, spherical or oval, flat, concave or convex, all sorts and conditions, with one common essential, their smooth and shining faces. Fifty hammers are no more than a moderate outfit, for from first to last, in all hand-made work, the hammer is always in service.



HAMMERS

No wonder a little fellow exclaimed as he gazed about the shop, "Do you make hammers here?" and the answer might truthfully have been, Yes, for the majority of them are shaped and cast to meet the exigencies of the worker, and are not found in the market.

For raising silver the mallet of wood, the horn tip, and the steel hammer have each their devotees. A London, Edinburgh or Dublin silversmith may be counted on to use the steel hammer. In Sheffield and Birmingham, where much German silver is made, one is pretty sure to find the buffalo tip in favor, because it is held to be somewhat quicker. In late years the tip is not so easily obtained, and the wooded mallet sometimes supplants it. In our country, where demand has made us cosmopolitan as to our workmen, the steel hammer is universally accepted, and quite invariably adopted even by those who have been trained to the horn tip. It is asserted that it works more satisfactorily in closing the grain of the silver.

A revolving pan of charcoal upon which the piece can rest, and a gas flame, whose heat is intensified by a blast of air, pumped with a foot-bellows or fan through a rubber tube, is indispensable in annealing the silver, although it is not so many years since this softening was accomplished by thrusting the pieces, placed on pans, into a great coke oven.

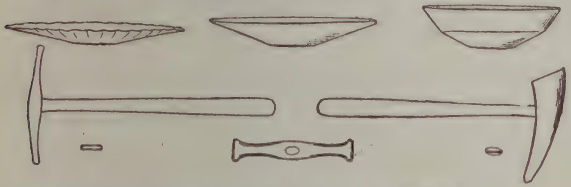
Equipped thus far, the workman is ready for his first process, either the raising or forging of his work. There is comparatively small range in the tools needed for hand-made flat ware. The shape is first rudely outlined by forging a straight strip, which should be considerably thicker, also shorter, than the pattern. It must be so hammered that the greatest thickness comes in the narrow shaft of the handle, while the bowl end is greatly broadened, and thereby made thinner. This done, it is filed to scale. The shaping of a spoon bowl, in hand-wrought work, may be done by striking it into a matrix of lead, with a convex, bowl-shaped punch, the matrix having been previously prepared by pressing the punch into melted lead, and allowing it to harden. There still remains the rounding and completing with the file before it can be bent into shape. The process is bound to be slow compared with machine-work, which has been wonderfully perfected. In place of the first rough forging the strip is cross-rolled, to spread the bowl. Another set of grading rolls distribute the thickness, and cutting-out dies, with a single blow, shape the pattern. Double dies under the great stamp not only ornament front and back at the same time, but in the latest processes give the contour. It is all done with an exactitude that leaves no rough edges, and reduces hand labor to the minimum.

For service hand-made spoons are practical only in the simpler patterns, depending for especial value either upon historical association or a careful study of beautiful lines. They admit of little ornamentation other than what may be given through color. The ornate spoons which mark our time are necessarily the product of the steel die and stamp. The exquisite application of beautiful die work to flat ware is essentially American, and a carefully chosen collection of the best examples might easily assume great historical value in connection with its period. Historical association does some memorable things by way of values. A retail price for spoons in regular market is rather more than a dollar an ounce.

At Christie's, in London (the same place from which Thackeray, in his "Four Georges," says, "Harry Walpole might have been seen hobbling into his carriage with some gimcrack just bought"), within the past six months there was sold a full set of thirteen apostle spoons, dated 1536, the price paid being £4,900, or over $700 an ounce.

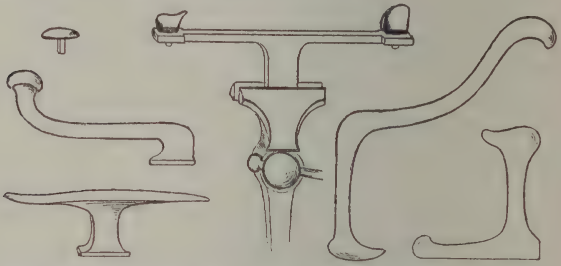
The making of hollow ware presents an inexhaustible variety of form and ornamentation, and the tools required are more interesting and numerous. The design having been determined, it is first necessary to prepare from it the working scales. Sometimes it is desirable in interpreting a design to model a section of the piece in clay, to more clearly establish the balance of its parts. The silver is then cut from the flat stock, with a pair of heavy cutting shears, the base marked from the center out, and the edges uniformly crimped, suggesting the scalloped tin of the kitchen. Geometrical accuracy is imperative. Beginning just outside the base line, it is hammered round and round over the anvil, until the silver becomes too hard to answer to the blow. This process lifts it out from the flat and gradually straightens out the crimped edge.

The height to which it can be raised in a single course depends upon the skill of the hammerer. When it becomes hardened, it must be annealed and newly crimped and a second course of hammering begun, the process being repeated until the proper height is atttained. The raising of a bowl with slightly curved sides is perhaps the simplest thing that can be undertaken, but the novice is in danger of so handling his stock that it becomes thin and uneven as the edge is approached, instead of gaining strength where strength is most needed, as it does under the trained hand.



COURSES IN RAISING A BOWL WITH HAMMERS AND HORN MALLET

Raising lifts the sides in a straight line, and it must now be shaped to the pattern of the design. The first group of shaping-tools is known as the stakes. The most valuable of them are made of steel, the coveted possession of the craftsman. They may well be called a group of contortionists, such unconventional shapes as many of them assume. Some of them are aptly named from fancied resemblances, as the mushroom, crutch, saddle and gibbet stakes, but the majority of them go unnamed. A set of very prim and upright ones is used to shape bottoms, a perfectly flat surface being required where the piece is to stand on its own base, a convex top being used for bottoms having feet for a standard. The necking in stakes, used to get the concave outline of teapots and similar shapes, are quite symmetrical, suggesting with the upward turn at the end the thumb held horizontally. Whatever the curve outlined by the piece, it must be met with a similar curve in the stake over which it is hammered, and as the line is continually changing with the advance of the work, one stake is often replaced by another which takes it forward to the desired end. For their use is required a vise firmly planted and with unyielding jaws, and in spite of attempted improvements nothing has been found to excel the old blacksmith's vise. Stakes are always made with a shaft, that may be clamped into the vise, leaving the shaped end free.



STAKES, WITH CRANK AND HEADS

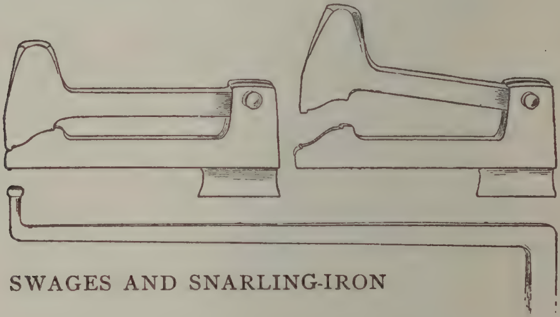
Heads are a group of smaller tools, equally varied as to shape. They are all made with a shank which fits into either end of a tee-shaped crank, which in turn is fastened into the vise. They are to some extent interchangeable with the stakes, but their general purpose is for the final lighter hammering necessary to give an even surface. They are stubby, highly polished, little tools, all fitted to the same crank. Neither heads nor stakes will be found catalogued among supplies, being usually cast in iron from wooden models made to suit the work.

In factories, drafting in presses and spinning supplant the raising and shaping of hand-made work. In spinning, the piece is shaped in gradual courses on a lathe, over a wooden model; the spinner starting from the center, first working from the inside, to draw it up slightly, and then conforming it to the model from the outside by pressure of a heavy steel burnish held against it as it revolves.

The wooden models are called chucks, and their name is legion. In spinning a piece the chuck is changed as the work advances, much the same as the stakes are in hammering. If the work is necked like a cream-pitcher, the last courses bind the chuck fast inside. This difficulty is obviated by splitting it into sections, puzzle fashion, and fitting it together in such a way that the withdrawal of a central piece releases the others and allows of their removal. In the first days of spinning, the chuck was burned away, necessitating a new one for each piece spun. Both expert hammerer and spinner learn to treat their silver wooingly, knowing its perverse objection to force.

The spun piece lacks the individuality of hammered work, the ninety-ninth piece being exactly reproduced in the nine hundred ninety-ninth, and it is through this multiplicity that the price is brought within range of the multitude. The hammerer, following a specific contour, yet varies his work according to his mood, not unlike the manner of his great master teacher Nature. He may have a new impulse before the second piece is begun, he may make twenty pieces of some favorite pattern; but each piece will present distinctive differences if closely studied for comparison.

Tray-making is a department to itself. The smaller sizes may be stamped, but larger ones are usually swaged. The most expensive tool of a small shop is the bottom stake, used for hammering the flat surface; a cubical piece of wrought iron with a welded steel top, about five by seven inches, and a shank by which it is firmly bedded like the anvil in a larger wooden block. Its top is only slightly full and polished like a mirror. The forging, welding, hardening and tempering, and final finish of a perfect bottom stake represent one of the triumphs of a tool-maker's craft.



SWAGES AND SNARLING-IRON

The swages by which the edge is lifted to receive the mount are the grotesques of the shop, being easily suggestive of rude Celtic heads with gaping jaws. They are worked in the vise, the lower jaw being stationary. The edge of the tray is hammered as it is slowly revolved between the complementary curves of the two jaws, the upper one of which is hinged. The contour of the uplift being thus formed, it is ready for the mount. Heavy and elaborate mounts are made from stampings, done in sections, and fitted and soldered to the edge. In hand-made work it is best to undertake only the simpler mounts, that may be made from reeded or turned wire. The setting of the bottom comes last. It must be so hammered that the tray is just slightly full in the center, but on no account left so that it will buckle back and forth under pressure of the hand. This becomes increasingly difficult as the size advances, and the silversmith who can hammer a perfectly rigid bottom in a twenty-four inch tray is very justly proud of his skill.

Wire is used in so many ways, that a considerable stock would be always needed if it were kept in all sizes. With a drawbench and tongues any size is obtained, by passing it through a plate containing a series of graded holes. The hand-power drawbench is interesting as retaining unchanged the form used in Cellini's day.

The same pan and flame are used in soldering as in annealing. The interesting part of soldering is found in the ingenuity and nicety called for in fitting and securing the parts, and the pride of the workman in a nice clean job, in which no more solder is used than is actually required.

The work of finishing, from the writer's standpoint, is a necessary evil. Under the most painstaking effort some marks will be incurred which require removal. These are first stoned out with pumice, and later the piece is evenly surfaced with "water Aye stone," a soft, gray, slaty-looking stone from the land of Burns. Hand work beyond this point is wasted time, since it is wholly monotonous and mechanical, and the finishing-lathe, with its brushes and buffs, is a welcome adjunct. The degree of polish is a matter of taste. The professional finisher will sacrifice everything to produce a spotless surface of mirror-like perfection, and surely nothing makes a cheerier, more attractive display than a glittering collection of this description, as is well illustrated in a fine old Fifth Avenue store, where the cases are lined with nothing but this brightest of silver.

Its flawless perfection vanishes with the first instant of its use, and the hand worker generally chooses a middle ground, such as will be easily retained in service, and at the same time detract nothing from the careful detail of his work.

The study of heightened effects produced through color adds a chemical interest to working in silver, that of late years has been minutely studied, until the natural oxide and parcel gilt of bygone days are now greatly varied.

We are seldom content for long with the simplest forms that will meet necessity.

Ruskin recognizes this disquietude of spirit as the "desire of change," saying that the building of birds and bees needs not express anything of it, for it is perfect and unchangeable, but we, because we are something better than the birds and bees, must confess we have not reached the perfection we can imagine, and cannot rest in the condition we have attained. Under pressure of this great vital instinct we are soon led to the last department of the silversmith's work, that of ornament.

For plain ornamentation the quiet dignity of a beautiful flute is always satisfactory. The set universally known as the "Queen Anne" is a fine example of what may be done with a simple, straight flute. Old sets of this pattern were worked by hand, and differences of relief and other detail make them subjects for interesting comparison. Its popularity has been the occasion of its downfall. It is now often carelessly modeled, and stamped in halves and soldered. This is only true of cheaper sets, for fine examples are still made and hand fluted. A more seductive and subtle flute may be found illustrated in the September *Craftsman*, in a piece attributed to Lelièvre.

A curious tool known as the snarling-iron is used in smaller flutes, where the work is to be completed on the pitch. The difficulty of delivering a blow on the inside of the body is overcome by this long slender iron with its rounded, upturned end, over which the piece is held while the long arm of the iron is hammered, the blow reacting at the end upon the silver and forcing it up. It makes a ludicrous, complaining noise aptly characterized by its name. It is a tool as old as the draw-bench and has never been improved upon. The flute is roughly indicated by this process and worked up from the outside with the punches. Larger flutes are shaped on wood, and perfected on steel heads.

It is necessary in all ornamentation to work against a resisting medium, which, while sufficiently firm to preserve the shape, is yet elastic enough to yield to the required outline or relief. This is found in a composition known as chaser's pitch. It is to be found listed among supplies, but unless the chaser understands compounding it, he frequently undergoes annoyance from its failure to meet his needs. It is melted and poured into the piece and allowed to harden. A canvas bag filled with sand, or a leather collar is needed to rest the work upon, and it is held firmly in place by a narrow leather stirrup, which is passed through holes in the bench, and in which the foot rests as the chaser sits at work.

The most numerous tool in the shop is the little steel chasing-punch, much smaller than the fluting punches, being no larger than a ten penny nail. The top is flattened to receive the blow of the hammer, and the opposite or chasing end has an endless variety of delicately graded forms. The working outfit of an experienced chaser comprises hundreds of these little tools, which have been shaped, hardened and tempered by him to suit his need. The hammers for the work are very light with slender shafts.

An old form of ornamentation, closely allied to line engraving, and quite recently revived, is known as flat chasing. It is done without relief, depending for effect upon beautiful outlines, and a carefully considered study of related backgrounds. The punches used are narrow oblongs called tracers, and mats for the ground.

A kind of work not so often seen is intaglio, in which the outline is set down throwing the pattern into relief. Between the low relief of intaglio and high relief of repoussé there are endless gradations, in which the treatment may be simply a matter of bold, strong outline, or embody the minutest and most delicate detail. The artist here betrays himself revealing his strength and his limitations.

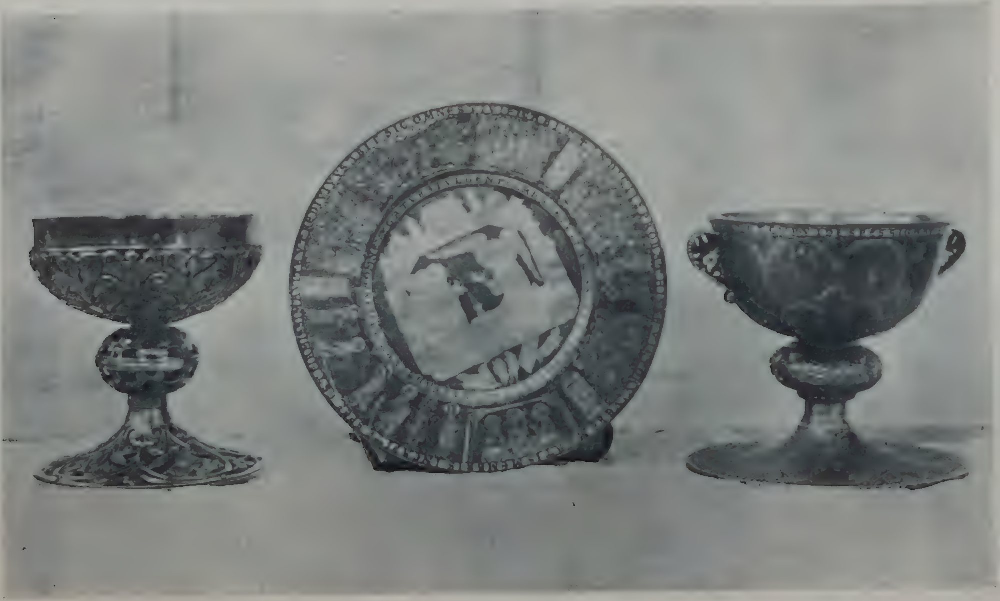
The pattern is first drawn on in pencil, and corrected with the marking-point. Then the relief is considered, and the snarling-iron indicates in rude upliftings where this is to be worked up. This done, the piece is filled with pitch and cooled, when it is ready for the sand bag and chasing punches. The ground about the outline is first set down, and then the pattern is treated in detail. The process is the same as in the large shops with this exception. In the large shop no time is figured for individuality. The pattern is furnished by the designer and the problem becomes, "how many in a given time." The worker copies faithfully as he can, with no concern as to the why that underlies the how, concentrating his purpose on attaining skill.

The occasional one whose soul is intent on expressing the best that there is in him, can never appeal to the many, known to the trade as the market, he must be content to work for the few who recognize the truth of his effort and find a joy in it.

No account of tools or processes can carry with it the infectious enthusiasm that accompanies their use, even though one be but an onlooker. The absorbing interest that follows the new shape to be determined, the lacking tool to be supplied, the style of ornament best suited to the chosen form, its treatment, its limitations, knows no abatement.

Unless the workman is prepared to count the joy of doing things as a part of his assets, it is probably best that the work be done in sympathetic groups, directed by a master spirit. The technical difficulties that confront the would-be metal-worker are scattered thick if he would carry on the work alone from design to finish, and no term of short apprenticeship will suffice.

But if there only be within him the spark of the thing that lifts his effort to the higher level of true art, the warmth of that wee fire will comfort and uphold him in his endeavor, so that selecting and arranging from the great Wonder Book that is his free possession, he may so interpret the things he finds that the seeing eye pauses to behold the challenge of his inspiration, lingers and is satisfied.



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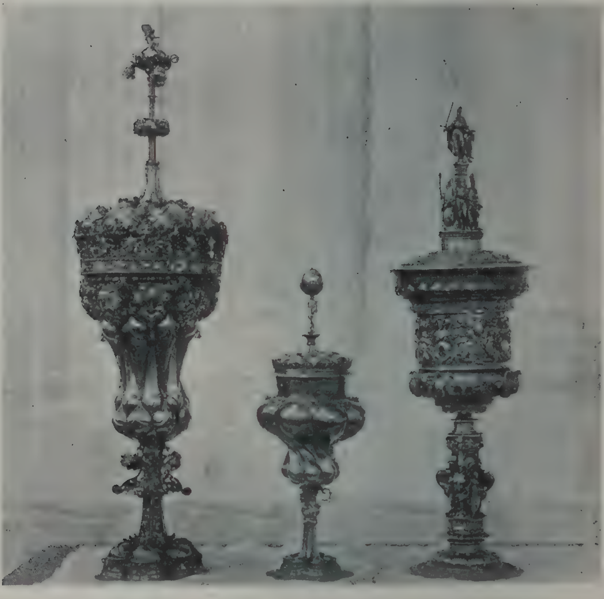

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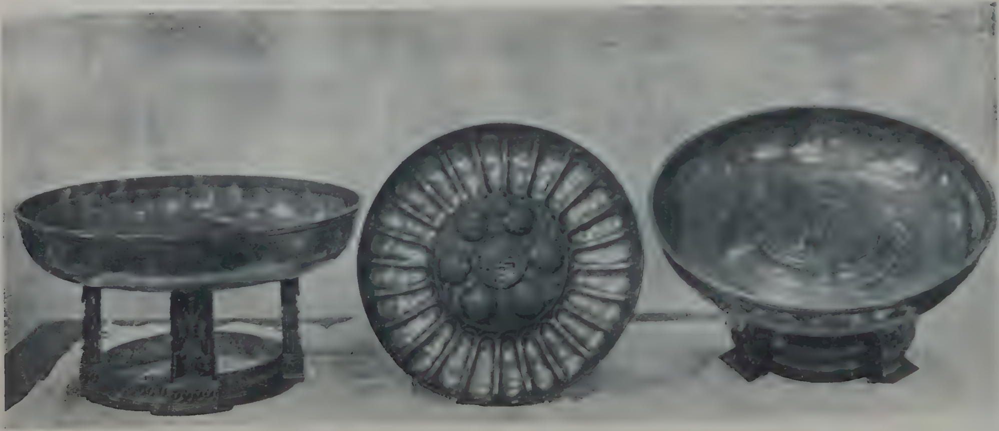

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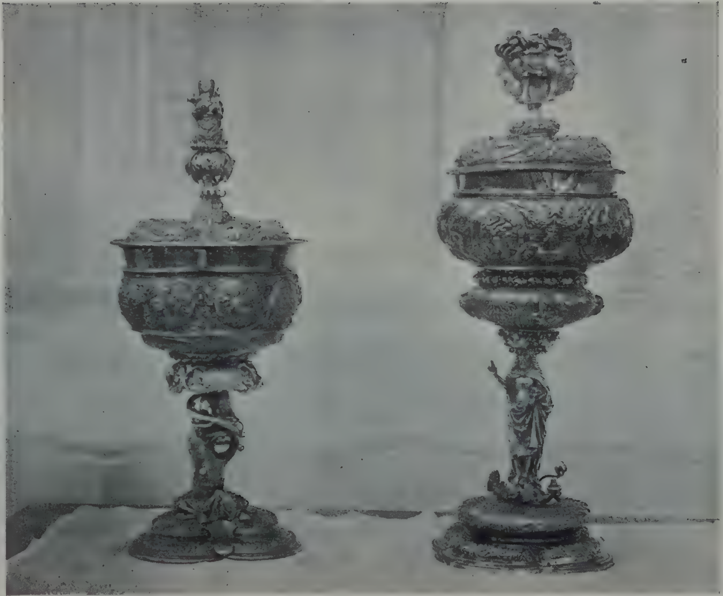

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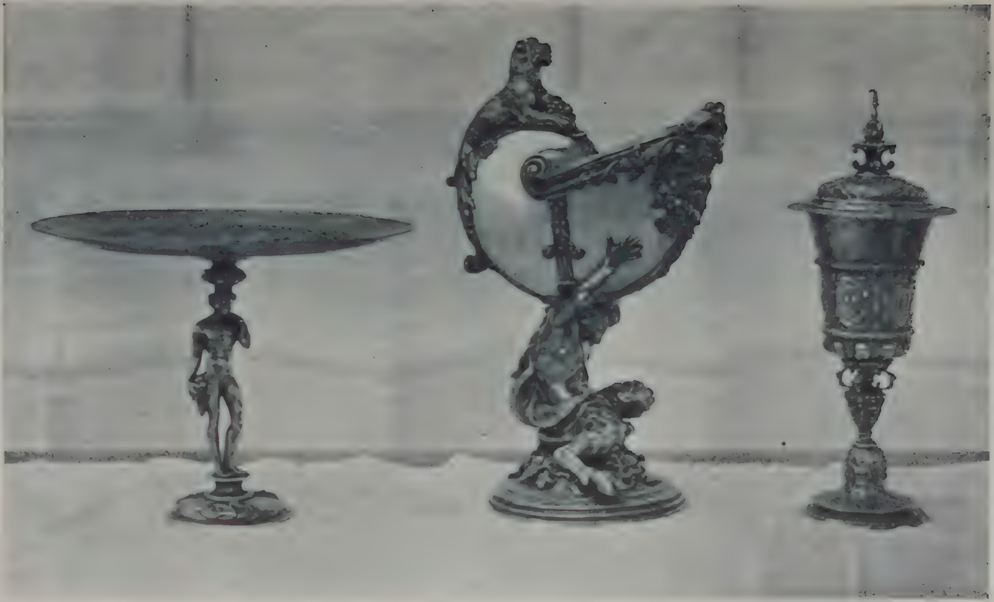

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HANDICRAFT

VOL. II MARCH 1904 NO. XII

GERMAN METAL WORK IN THE GERMANIC MUSEUM OF HARVARD UNIVERSITY

By Kuno Francke.

The fifty-five reproductions of German metal work, representing the development of this art from the twelfth to the eighteenth century, which have been presented to the Germanic Museum of Harvard University by distinguished citizens of Berlin and other German cities and are now on exhibition in Cambridge, cannot fail being of particular interest to the readers of a journal devoted to the cause of handicraft. A few remarks, therefore, about some selected specimens of this collection may not be amiss here. They are intended as a running commentary to the accompanying pictures.

Our first illustration presents types of Romanesque church vessels of the twelfth century and the early part of the thirteenth, a communion chalice of Westphalian make (No. 1) and a communion paten and chalice (Nos. 2 and 3) from a monastery near Innsbruck. These vessels are equally remarkable for the simplicity and dignity of their outline and for the grace and richness of their ornamentation. The forms of the chalices are compact, yet fully articulated; the round knob which

The last illustration brings together a few specimens of the later Renaissance and Baroque style. Particular mention in this group deserves No. 13, a Nautilus goblet, by a Berlin master of the beginning of the eighteenth century. Civic art has now been superseded by princely art. Splendor and elegance has taken the place of solidity and firmness. That, however, even in the courtly art of the eighteenth century there was not a little of boldness of invention and delicacy of execution left, this exquisite little goblet emphatically testifies.

The whole collection is a noteworthy addition to the resources of Harvard University for the study of Germanic civilization, and gives, besides, striking evidence of the high state of efficiency reached by the electrotype technique in contemporary Germany.

POTTERY:
ITS LIMITATIONS AND POSSIBILITIES

By William Hagerman Graves.

A brief review of so vast a field of human effort as the making of pottery is like the panoramic journey at the Paris Fair over the Trans-Siberian Railroad from St. Petersburg to Peking. Scarcely twenty minutes were needed for the trip. The glimpses it gave, however, of certain appearances of the vast domain of the Czars aroused definite impressions of the limitations and possibilities of their power. Words are poor substitutes for pictures and examples in presenting any subject within the range of the Arts and Crafts, but they may serve to urge a better appreciation, on the part of both the potter and his patron, of the forms and enrichments appropriate to the potter's materials.

Probably in no other of the Decorative Arts have there been applied and misapplied more patient labor and skill of execution than in the embellishment of pottery. Many of the most famous wares, such as the later Sèvres, show little trace of natural methods suitable to pottery. The English Wedgwood, imitating the cameo glass of the beautiful Portland Vase, suggests something of classic refinement, but is devoid of the life and freedom of plastic clay. Other English wares, Chelsea, Derby, the modern Doulton, have forms indicating some beauty of line, but, loaded with writhing masses of ornament, seem to be waiting the coming of a St.

George to release them from the dragon of Commercialism. The Japanese, unapproached in their marvelous facility of invention and skill in the use of clay, pastes and pigments, often spend the utmost labor and patience in making a pot resemble a bag, a wooden box or anything rather than what it is. But this is doubtless an expression of their peculiar sense of humor. We cannot resist the charm of anything that comes from the hand of the Japanese potter.

Pottery (speaking from the Dictionary) embraces everything made of "burnt clay." Porcelain is only distinguished from the more comprehensive term "Pottery" in the kind of clay used. When clay is rich in its basic element alumina and has a sort of plastic or unctuous "feel" it is termed "fat." In this condition it can be worked most easily, but will shrink up and crack to pieces in a high fire. To prevent this and also to make the glazes adhere in the second firing, the clay is made "lean" by the admixture of "grit" made of burnt clay ground up or silica in the form of fine sand or flints; in the case of the more elaborate preparations for porcelain, pure quartz crystals, ground to a fine powder. Kaolin, the most important ingredient of porcelain, consists of decomposed feldspar or granite rock. This rich form of alumina is found in its purest state in China, where it was washed down from granite hills a million years or so ago and deposited in the beds of ancient rivers. Porcelain is distinguished from other pottery in being whiter, harder, less fusible and slightly translucent. The Chinese considered pottery just as good a basis for enamel decoration as porcelain.

The glazes and enamels that have been used from all time are made of the ingredients of glass, the glazes being transparent and the enamels being made opaque by the addition of the oxides of lead or tin. These enamels have a natural affinity for clay if it has been made sufficiently "lean" by the use of the element common to both, silica. The Egyptians had unlimited supplies of "fat" clay from the rich deposits of the Nile, but they did not understand the simple devices for making it lean, consequently their wonderful enamel colors could only be used on small objects like the mummy figures, seals and scarabs to be seen in the Museum. The Assyrians, on the other hand, attained a much greater proficiency in the use of these opaque glazes on burnt clay, the two inner walls of Babylon being covered with enameled tiles. In the royal palace of Nimrod was found a frieze representing a lion hunt which shows a feeling for harmony of color and skill in decorative arrangement that has hardly been surpassed. These tiles are in size about 9 x 12 x 4 inches thick, coarse and bubbly in texture, with a hard vitreous surface nearly 1-8 inch in thickness. A similar use of enameled tiles in large heavy pieces built into the walls can be seen in the New York Subway to-day. There are even traces of the "rough" and "bubbly" texture described above, but as they are to be seen from a distance the architects have kindly acknowledged the force of the precedent set by Nimrod's royal potter! The use of tiles in a way truly appropriate to the materials of which they are made is still in its infancy in this country. Our fellow member, Mr. Henry Mercer, has given us a glimpse of its possibilities, notably in the Fenway Court and in the house of Mr. Horace Sears at Weston, where are examples of the best that has been done by both Mr. Mercer and the Grueby Company.

The first process in the art, after the preparation of the clay, the "throwing" or moulding of the clay on the potter's wheel, has been in use with few changes for sixty centuries. Fig. I is taken from a picture on an Egyptian tomb. It shows the kind of wheel in use about 4,000 B. C. and consists of a disk or round table on a pivot, which was spun by hand. Exactly this form of wheel is used in many parts of India to-day. Under the Ptolemies, a large wooden disk was added for the potter to keep the wheel revolving with his foot, an apparatus which differed in no respect from that shown in Fig. III, representing a scene in an Italian Majolica factory of the sixteenth century. This kind of wheel is still employed at Sèvres. The wheel at the Grueby works differs from this only in the substitution of a crank lever and pedal for the lower wheel, enabling the potter to get more efficiency out of a given amount of foot power.

The whole character of a vase may be determined by the potter at the wheel. The ease with which the plastic clay answers to the touch of hand, rising and falling and taking a whole succession of symmetrical shapes, is very fascinating to watch.

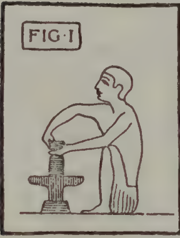
Homer compares the rhythm of a dance to the measured spin of a potter's wheel. The Greeks, as in every plastic art, reached the highest point of perfection in the shapes of their pottery as well as in its decoration. They limited themselves to a few different kinds of shapes or motives, avoiding the unusual or merely novel, striving always to set a new artistic record, but on the same track. As in architecture, they tried few experiments and consequently made few mistakes. Pericles would have found no pleasure in the Art Nouveau display at Turin last summer.

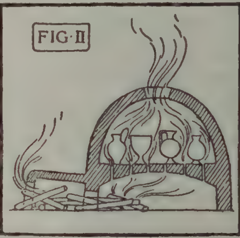
Unfortunately the freedom of touch given by the potter's hand is greatly injured by the practice of finishing the pot on the lathe to make the form more mechanically perfect, while at many potteries both wheel and lathe are discarded for the still more mechanical plaster mould. In the case of the Grueby, the hard finish sometimes given it by the potter's tools is softened by the thick enamels with which it is afterwards covered. The Roman unglazed ware of which Mr. Nickerson has given us such fine reproductions was made by a combined use of both wheel and mould.

The baking or firing of pottery has undergone as little change in principle as the moulding on the wheel. Fig. II shows a cross section of a kiln discovered at Corinth. Modern kilns differ from it only in having more places for admitting the fuel, the addition of flues and a cone shaped chimney over the dome. Pottery is usually fired once to bake the clay, when it is called "biscuit," and then again to fuse the glaze, which is put on by dipping the pot into a bath of it, painting it or blowing it on. Some elaborately decorated porcelains like the Sèvres are fired a good many times at a succession of decreasing temperatures, as some pigments will not stand as much heat as others. This is why underglaze pottery like the early Majolica was limited to only two or three colors. The early Majolica also derived its soft mellow effect from the fact that the decoration was painted directly on the white enamel into which the vase or plate had been dipped. The pigments sunk into the slightly absorbent ground as they were painted on: the touch of the brush necessarily had to be rapid and certain, as there was no chance to rub out mistakes, and the design was consequently bold and broadly decorative. When it had been dipped in a thin, transparent glaze and fired, the slight blending of color with the white ground resulted in a simple charm and more truely decorative effect than is seen in the later examples, in which elaborate pictures (some even by Raphael) were painted on the hard surface of the enamel after it had been fired. The early Sèvres ware or "pate tendre" is more beautiful than the later or "pate dure," for the same reason. The Persians, who excelled in all the Decorative Arts, have furnished us examples of about all the fine effects that can be got in ceramics. Their influence seems to have extended further than that of any other potters who have used glazes and enamels, unless we possibly except the Chinese.

Until the Ming period (1368–1644) the Chinese depended for the decorative effect of their pottery and porcelain wholly upon the glazes themselves. Mr. Hugh Robertson has produced individual pieces of a beauty of glaze approaching the Chinese, though he has not made much use of the oriental forms, which wear his rare glazes to great advantage. The Grueby Pottery differs from Historical precedents not so much in the method of making as in decoration and texture. The undecorated pieces depend for effect upon whatever character may be given them on the potter's wheel, combined with any special beauty there may be in the color and texture, just as in the case of the oriental examples. In other pieces we have aimed at further decorative effect by modeling on them appropriate ornament in low relief, the crispness of which is softened and given a fictile character by the thick opaque enamels. Our direct precedent and inspiration for this style of decoration was the work of the famous French potter Delahersche, whose kilns are at Beauvais.

If Arts and Crafts Societies stand for one particular thing more than another, is it not for the promotion of "good taste" or the fitness of things in matters of decorative art — by exhibitions, by keeping a shop, by making themselves felt in the Community? Is not the attendant "joy" to the honest worker in doing things well and the appreciation of the honest purchaser in possessing them a sort of by-product rather than one of the raw materials of which the thing is made? The craftsman must himself change the conditions under which he works if he wants them changed. The Public won't do it and the Society can't, but the Public will soon or late buy his goods if they are good. The evils of Commercialism as affecting art are the evils of bad taste and can be cured only by the example of good taste. William Morris succeeded not so much by what he said as by what he did, and the things he did changed public taste in England and America. The work of Clitis, a Greek artist who painted vases, was at one time in such demand that many potters were on his waiting list. With increased respect for the natural limitations of their crafts while realizing more fully their possibilities, many of our craftsmen are beginning to find themselves in the enviable position of the Greek painter of pottery.


FIG·I


FIG·II

FIG·III

HONEST FURNITURE

By J. VAUGHAN DENNETT.

THERE is certainly a growing demand from thinking people of good taste for simple and well made furniture, something entirely unlike that to be found in the ordinary furniture market. For those not compelled to consider price it is often difficult, if not impossible in some cases, to obtain the things required, even if made to order by large firms. What chance, then, has the person in moderate circumstances to furnish his house in accordance with his taste and desires?

Before furniture was made in wholesale lots in large factories by those who know little of design and the tradtions of the craft, and sold by them to retail dealers who know less, the consumer stood a good chance of getting what he wanted, for being in direct communication with the master cabinet maker — designer and workman — good results would naturally follow.

The present-day conditions in furniture manufacturing are far from perfect and do not meet the requirements of a large class. By no means is the manufacturer to blame, unless he be also the retailer, in which case culpability certainly exists in large measure. But the buyer must share this blame, for it is he who compromises by taking that which is not quite up to his standard, by following fads and fashions, and by his continual and constant demand for cheapness: destroyers of any art!

Of course, if the demand for good and simple things were made insistent by many people, it would be supplied and that at once. Probably there are few who give the subject a thought or who care one way or the other; but there is a small minority who want good furniture and will have no other, and these must be supplied from outside the furniture trade, so called. Furniture buying is like clothes buying, in a way, and should be approached in the same manner.

When communities are again willing to support cabinet makers, competent workmen will be on hand ready and able to produce as good work as ever was; perhaps this time is far off or maybe it is nearly here, but it will surely come; until then only a portion of the people can live with honest things. With even a fair encouragement, existing conditions could be greatly improved, and work nearly equal to that of the eighteenth century might be produced at a cost no greater than that asked for the best things at the furniture stores. Inability to see the wares before buying, and instant want may cause the store visit, frequently followed by unending regret. Most cabinet makers could give their patrons clear ideas in regard to the subject at hand, and a reasonable wait with ultimate satisfaction is certainly preferable to the case of vain regret.

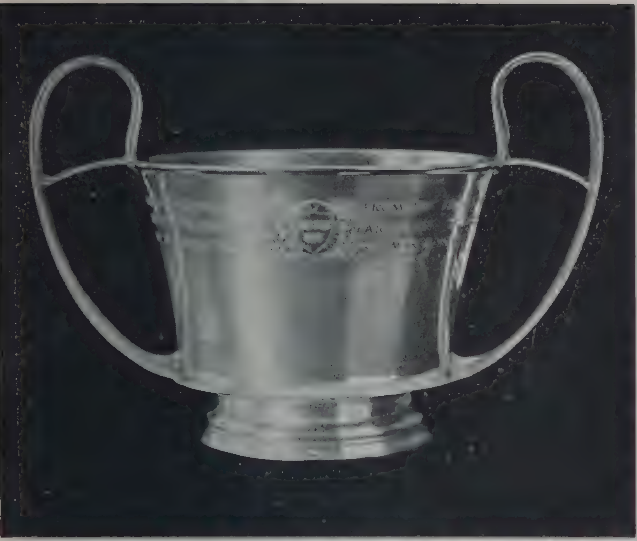
The Arts and Crafts movement has set a great many people thinking about some of their surroundings and of the unnatural conditions under which they are made; this has already done some good and may be of lasting benefit even if the present Arts and Crafts rage proves just a passing fad. Some of the things sold by Arts and Crafts societies are no better, and in some cases are actually worse than similar articles to be found in the open market. To be sure this is exceptional and to be expected before things get shaken into their proper places.

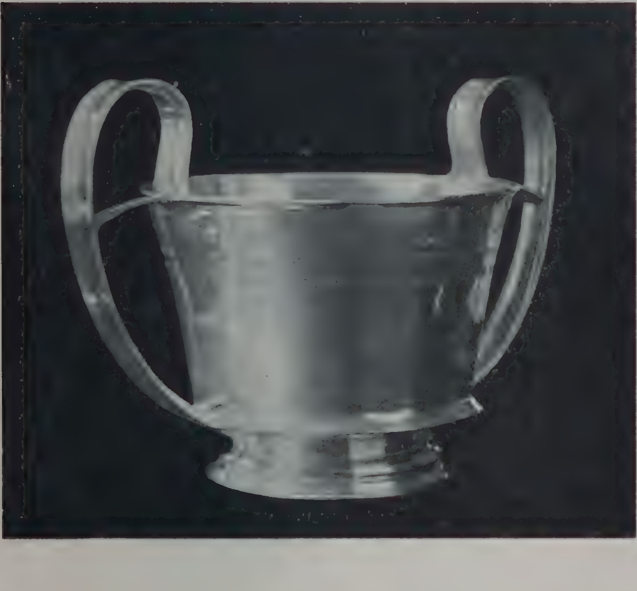
Fashion enters largely into our subject and is directly responsible for much that is not right. It is absurd to think we must banish some of our choicest possessions at frequent intervals in order to replace them with something more fashionable or up to date. If our table legs or chair backs were ever good, why shouldn't they remain so? By all means let us change for the better, but in no case for the worse. With fashion continually changing the shape, the material, the color and the finish of our furniture, it is no wonder we have nothing good. This constant desire for novelty and change is proof positive that no deep thinking is going on among the bulk of the people; and until this is done, it is unreasonable to expect any improvement in the general situation. Satisfaction and inertia do not breed progress, but united and intelligent dissatisfaction, energetically expressed, is a great lever and can do anything.

The application of common sense and serious thought, each for himself, with no regard to fad or fashion, nor to what others do or think, will go far in clearing the sky and in paving the way for simple, honest and better things.

A LOVING CUP GIVEN TO PRESIDENT ELIOT, OF HARVARD UNIVERSITY

THE delay in the appearance of this, the last number of HANDICRAFT, which was due to a fire at the printers, is so far fortunate that it enables us to publish photographs of the silver loving cup which was given to President Eliot of Harvard University on his seventieth birthday, by the Faculty of Arts and Sciences. The cup was made by a member of the Society of Arts and Crafts, Mr. Arthur J. Stone of Gardner, Mass. Its design is in its main outlines an enlargement of a Greek carchesium, or drinking-cup, of the early part of the fifth century B.C., now in the Museum of Fine Arts in Boston, which was selected by the committee as a model. The Greek original is one of those pieces of Greek pottery, common at that period, which imitated metal in its main outlines. It was therefore a form suitable for retranslation into metal. In enlarging it, it was of course necessary slightly to change the proportions in order to preserve the delicacy of detail of the original and also because of the different material in which it was to be executed. The silver loving-cup measures twelve inches across the handles, and is about eight inches wide at the rim and eight inches high to the top of the handles. It was found that the scheme of proportion underlying the Greek design was that division of a dimension into two parts which the Germans call "the golden section," in which the smaller part is to the larger





as the larger is to the whole. This scheme of proportion was not only preserved in the silver cup, but occurs in it more frequently than in the Greek original. Thus the two mouldings of the base are in this proportion; the height of the base and the height from the top of the base to the point of the projecting rim from which the lower end of the handles spring; the height from the bottom of the cup to the point of this rim and from here to the bottom of the inscription; the distance from the edge of the upper rim of the cup to the top of the inscription and the total width of the inscription; the height of the letters and the distance between each line of the inscription; the distance from the top of the handle to the cross-bar and from the cross-bar to the foot of the handle; the horizontal projection of each handle from the body to half the diameter of the body; all these are in this proportion. The proportion itself is a very satisfying one and we have here a very interesting exemplification of the principle that, to produce harmony, the same proportion should be repeated in different dimensoins in different parts of a design.

The cup is not spun, but was beaten up by hand, the handles also were wrought from heavy bar silver and heavily soldered on to the body. The inscription was formed by punching in the letters and then inlaying with gold-wire, the wire being forced into place, shaped and flattened by punching. The letters were left in very slight relief. The punch-marks of the lettering inside the cup were faced off until they hardly show. As will be seen, the inscription forms a band about the body of the cup. In the center of one side is the college shield. This was embossed and engraved, and the background filled with gold, using gold-leaf. The filling is flush with the surface of the shield. A branch of laurel and a branch of oak, one on each side of the shield, were snarled up from the back and chased in relief, the laurel fruit and acorns being made of gold inlay. The finish of the cup was purposely kept somewhat dull and the effect of the hammer-marks, hardly seen, gives to the surface the scintillation which is so beautiful in old Elizabethan silverware.

The inscription reads as follows: "Charles William Eliot, President of Harvard University," and on the opposite side of the college shield, "From the Faculty of Arts and Sciences, March 20, 1904": on the other side of the cup, "In grateful Acknowledgment of his Devotion to the University for thirty-five years and of his Passion for Justice for Progress and for Truth."

EDITORIAL

Professor Francke's interesting description of silverware at the Germanic Museum of Harvard University, which we are fortunate in being able to publish in this number, suggests a few words on the use of Museums to craftsmen.

This beautiful and varied collection of reproductions of German silversmiths work, a few of which we illustrate, is for purposes of study and inspiration practically as good as if it consisted of originals. But this is only one among many things of vital interest to craftsmen of various kinds which are to be seen in the Germanic and other Museums of Cambridge. The Museum of Fine Arts in Boston is rich in original examples of Greek and Japanese pottery, in metal work of different periods and of diverse civilizations, in wood-carving, embroideries, and in examples of other handicrafts. Most of our great cities now possess Museums where examples of the beautiful arts of the past are gathered together. How much use of these treasures is made by the craftsmen? How many craftsmen who have the opportunity to study these instructive and inspiring things make the most of these opportunities? How many employers of craftsmen send their workers to the Museums for purposes of study?

We do not urge upon craftsmen to directly copy the work of the past; but we do urge the value of constant and painstaking study and analysis of the most beautiful things; of the constant comparison of ones own work with the best things in their kind which are within one's reach. To truly appreciate the excellence of proportion, the delicacy of feeling, the appropriateness of form and of ornament in the finest things: to be familiar with these excellencies; to hold these standards constantly before one is certainly to improve the work one is doing. We do not make enough use nor the best use of our museums. We walk through them till we are tired instead of giving careful and affectionate study to one or two fine things and coming away refreshed and encouraged to return soon again to renew our inspirations.

. . . .

It is with regret that with this last number of its second volume we bring HANDICRAFT to an end. If it has served in any degree to stimulate right endeavor in the handicrafts it has served the purpose with which it was started. If we now bring it to a conclusion, it is mainly in order that we may devote more energy to the carrying out in practical work of the principles and of the ideals for which it has contended. As the need arises or opportunity offers, the Society hopes from time to time to publish separate articles or reprints, which will in effect continue the work of the magazine. H. L. W.